Glossary

EQUILAY CONDUCTOR — a conductor constructed with a central wire surrounded by more than one layer of helically laid wires, all layers having a common length of lay, direction of lay being reversed in successive layers.

PARALLEL CORE CONDUCTOR — a conductor constructed with a central core of parallel-laid wires surrounded by one layer of helically laid wires.

ROPE-LAY CONDUCTOR — a conductor constructed of a bunch-stranded or a concentric-stranded member or members, as a central wire, around which are laid one or more helical layers of such members.

UNIDIRECTIONAL CONDUCTOR — a conductor constructed with a central wire surrounded by more than one layer of helically laid wires, all layers having a common direction of lay, with increase in length of lay for each successive layer.

UNILAY CONDUCTOR — a conductor constructed with a central wire surrounded by more than one layer of helically laid wires, all layers having a common length and direction of lay.

CONDUCTOR CORE — The center strand or member about which one or more layers of wires or members are laid helically to form a concentric-lay or rope-lay conductor.

CONDUCTOR SHIELD — A conducting layer applied to make the conductor a smooth surface in intimate contact with the insulation; sometimes called extruded strand shield (ESS).

CONDUIT — A tube or trough for protecting electrical wires or cables.

CONNECTION, DELTA — Interconnection of 3 electrical equipment windings in a delta (triangular) configuration.

CONNECTION, WYE — Interconnection of 3 electrical equipment windings in wye (star) configuration.

CONNECTOR — A metallic device of suitable electric conductance and mechanical strength, used to splice the ends of two or more cable conductors, or as a terminal connector on a single conductor. Connectors usually fall into one of the following types:

— solder
— welded
— mechanical
— compression or indent

Conductors are sometimes spliced without connectors, by soldering, brazing, or welding.

CONTACT — The part of a connector which carries the electrical current.

CONTACT SIZE — The largest size wire which can be used with the specific contact. Also, the diameter of the engagement end of the pin.

CONTINUITY CHECK — A test performed on a length of finished wire or cable to determine if the electrical current flows continously throughout the length.

CONTINUOUS VULCANIZATION — Simultaneous extrusion and vulcanization (cross-linking) of wire insulating and jacketing materials.

CONTRAHELICAL — Cable spiralling in an opposite direction than the preceding layer within a wire or cable.

CONTROL CABLE — A cable used for remote control operation of any type of electrical power equipment.

CONTROLLED IMPEDANCE CABLE — A package of two or more insulated conductors where impedance measurements between respective conductors are kept essentially constant throughout the entire length.

COPOLYMER — A compound resulting from the polymerization of two different monomers.

COPPER-CLAD STEEL — Steel with a coating of copper welded to it before drawing as opposed to copper-plated. Synonomous with Copperweld.

COPPERWELD® — Trademark of Copperweld Steel Co. for copper-clad steel conductor.

CORD — A flexible insulated cable.

CORD SET — Portable cords fitted with a connector at one or both ends.

CORE — (1) In cables, a component or assembly of components over which other materials are applied, such as additional components, shield, sheath, or armor. (2) In fiber optics, the transparent glass or plastic section with a high refractive index through which the light travels by internal reflections.

CORONA — A discharge due to ionization of the air around a conductor due to a potential gradient exceeding a certain critical value.

CORONA RESISTANCE — The time that the insulation will withstand a specified level of ionization that does not result in the complete breakdown of the insulation.

CORROSION — The destruction of the surface of a metal by chemical reaction.

COULOMB — The derived SI unit for quantity of electricity or electrical charge: One coulomb equals one ampere-second.

COUNTER EMF —The voltage opposing the applied voltage and the current in a coil; caused by a flow of current in the coil; also known as back emf.

COUNTER-POISE WIRE — Bare copper wire used to offset the impact of lightning surges along high-voltage overhead lines and around the base of towers. Buried counter-poise wire is connected to overhead ground wires and towers. Numerous methods of application are used, dependent upon resistance of the soil at the tower base.

COUPLING — The transfer of energy between two or more cables or components of a circuit.

COUPLING LOSS — Signal losses in an optical fiber due to small differences in numerical aperture, core diameter, core concentricity and tolerances in connectors when two fibers are spliced together. Also known as Splicing loss and Transfer loss.

COVERAGE — The calculated percentage which defines the completeness with which a metal braid covers the underlying surface. The higher percentage of coverage, the greater the protection against external interference.

CPE — Dow Chemical trademark for chlorinated polyethylene. A jacketing compound.

CROSS-LINKED — Inter-molecular bonds created between long chain thermoplastic polymers by chemical or electron bombardment means. The properties of the resulting thermosetting material are usually improved.

CROSS-LINKED POLYETHYLENE — A dielectric material used for insulating and jacketing. Also referred to as “XLP” or “XLPE.”